

PCT

10/531659

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference I 10003 PCT	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 03/11436	International filing date (day/month/year) 15/10/2003	(Earliest) Priority Date (day/month/year) 15/10/2002
Applicant INTERCELL AG		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 8 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☒ contained in the international application in written form.

☒ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ Certain claims were found unsearchable (See Box I).

3. ☒ Unity of invention is lacking (see Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

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International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 28
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1, 7, 14, 15 (completely); 3-6, 8-13, 16-27, 29-37 (partially)

An isolated nucleic acid molecule, encoding a fibrinogen binding protein, comprising a nucleic acid having at least 70% identity to a nucleic acid sequence of SEQ ID NO. 1, 2, 3, 4, 5 or 6; an isolated nucleic acid molecule encoding a polypeptide comprising the amino acid motive of SEQ ID NO. 222, a polypeptide comprising the amino acid sequence selected from SEQ ID NO. 113-205 or SEQ ID NO. 222; process for producing such polypeptides, pharmaceutical compositions comprising the polypeptides, antibody, use of the polypeptide or antibody; methods for identifying an antagonist, process for in vitro diagnosing, affinity device comprising such polypeptide; uses of the polypeptides

2. Claims: 2, 3-6, 8-13, 16-27, 29-37 (all partially)

An isolated nucleic acid molecule encoding an adhesion factor comprising a nucleic acid having at least 70% identity to a nucleic acid sequence of SEQ ID NO: 7-10; a polypeptide encoded by such nucleic acid molecule; process for producing such polypeptides, pharmaceutical compositions comprising the polypeptides, antibody, use of the polypeptide or antibody; methods for identifying an antagonist, process for in vitro diagnosing, affinity device comprising such polypeptide; uses of the polypeptides

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 28

Claim 28 refers to an antagonist identified by a method according to claims 26 or 27 without giving a true technical characterization. Moreover, no such compounds are defined in the application. In consequence, the scope of said claims is ambiguous and vague, and their subject-matter is not sufficiently disclosed and supported (Art. 5 and 6 PCT). No search can be carried out for such purely speculative claims whose wording is, in fact, a mere recitation of the results to be achieved.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/11436

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07K14/315

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, EMBL

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/06736 A (HANIFFY SEAN BOSCO ; LE PAGE RICHARD WILLIAM FALLA (GB); WELLS JER) 10 February 2000 (2000-02-10) abstract; figure 1 ----	1,3-27, 29-37
X	GLASER ET AL.: "Genome sequence of Streptococcus agalactiae, a pathogen causing invasive neonatal disease" MOLECULAR MICROBIOLOGY, vol. 45, no. 6, 27 September 2002 (2002-09-27), page 1499-1513 XP002268222 the whole document ----- -/--	1-37

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

1 June 2004

Date of mailing of the international search report

04.08.04

Name and mailing address of the ISA

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C.(Continuation) DOCUMENT CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TETTELIN HERVE ET AL: "Complete genome sequence and comparative genomic analysis of an emerging human pathogen, serotype V <i>Streptococcus agalactiae</i> " PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 99, no. 19, 17 September 2002 (2002-09-17), pages 12391-12396, XP002268223 September 17, 2002 ISSN: 0027-8424 the whole document ---	1-8
A	MEEHAN M ET AL: "AFFINITY PURIFICATION AND CHARACTERIZATION OF A FIBRINOGEN-BINDING PROTEIN COMPLEX WHICH PROTECTS MICE AGAINST LETHAL CHALLENGE WITH <i>STREPTOCOCCUS EQUI</i> SUBSP. <i>EQUI</i> " MICROBIOLOGY, SOCIETY FOR GENERAL MICROBIOLOGY, READING, GB, vol. 144, no. 4, 1998, pages 993-1003-1130, XP000906842 ISSN: 1350-0872 the whole document ---	
P,X	SCHUBERT AXEL ET AL: "A fibrinogen receptor from group B <i>Streptococcus</i> interacts with fibrinogen by repetitive units with novel ligand binding sites" MOLECULAR MICROBIOLOGY, vol. 46, no. 2, 24 October 2002 (2002-10-24), pages 557-569, XP002268224 ISSN: 0950-382X the whole document ---	1,3-27, 29-37
P,X	DATABASE EMBL 'Online! GLASER ET AL.: " <i>Streptococcus agalactiae</i> genome sequence, use for developing vaccines, diagnostic tools and for identifying therapeutic targets" retrieved from EMBL Database accession no. AX602133 XP002268225 abstract ---	1,3-27, 29-37
P,X	& WO 02/092818 A (INSTITUT PASTEUR, CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) 21 November 2002 (2002-11-21) claims page 1-46 --- -/--	1-37

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/11436

C.(Continuation) DOCUMENT CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! 1 July 2002 (2002-07-01) TELFORD ET AL.: "Nucleic acids and proteins from Streptococcus groups a & b" Database accession no. CQ655069 XP002281290 abstract & WO 02/34771 A (CHIRON S.P.A.) 2 May 2002 (2002-05-02) SEQ ID NO: 12026 abstract ---	2-6, 8-13, 16-37
X	OSAKI M ET AL: "CHARACTERIZATION OF STREPTOCOCCUS SUI GENES ENCODING PROTEINS HOMOLOGOUS TO SORTASE OF GRAM-POSITIVE BACTERIA" JOURNAL OF BACTERIOLOGY, WASHINGTON, DC, US, vol. 184, no. 4, February 2002 (2002-02), pages 971-982, XP001156906 the whole document ---	2-6, 8-13, 16-37
P,X	JACOBSSON KARIN: "A novel family of fibrinogen-binding proteins in Streptococcus agalactiae." VETERINARY MICROBIOLOGY, vol. 96, no. 1, 8 October 2003 (2003-10-08), pages 103-113, XP002281289 ISSN: 0378-1135 the whole document -----	2-6, 8-13, 16-37

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Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0006736	A	10-02-2000	CA 2337102 A1	10-02-2000
			CN 1344323 T	10-04-2002
			EP 1100920 A2	23-05-2001
			WO 0006736 A2	10-02-2000
			JP 2002531054 T	24-09-2002
			US 2003138775 A1	24-07-2003
WO 02092818	A	21-11-2002	FR 2824074 A1	31-10-2002
			WO 02092818 A2	21-11-2002
WO 0234771	A	02-05-2002	AU 1412702 A	06-05-2002
			CA 2425303 A1	02-05-2002
			EP 1328543 A2	23-07-2003
			WO 0234771 A2	02-05-2002